








		camera settings back to the manufacturer default. However, all the MMS function settings will remain the same except for <b>MMS Phone Number</b> and <b>MMS Status</b> .
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### 3.2 Set up MMS on Camera

In TEST mode, press  key to enter, Press **MENU** key to exit the MMS Setup menu. Press ,  to move the marker, ,  to change the setting, and , to confirm the change. Always remember to press , to save the change.

Parameter	Settings ( <b>Bold</b> = default)	Description
<b>Auto Setting MMS Parameter</b>		Choose your Country ->Wireless Operator. Then enter the receiving cell phone number/email account. You can enter up to three numbers/accounts.
<b>Manual Setting MMS Parameter</b>		If you don't see your country and/or the wireless operator on <b>Auto Setting</b> , you need to manually enter the parameters. Ask your operator for URL, APN, Gateway, and Port (Account and Password if required). Then enter the receiving cell phone number/email account.
<b>MMS Options</b>	<b>Off</b> , VGA, SMS	The default setting is <b>Off</b> , which turns the MMS function off. To turn it on, choose either VGA or SMS. VGA is to send 640x480 pictures, where SMS means text messages (date & time) only.
<b>MMS Max Image No.</b>	<b>0</b>	You can decide the daily number of pictures sent via MMS. <b>0</b> stands for <b>Unlimited</b> . <b>1-99/Day</b> gives you flexibility sending up to 99 pictures per day.
<b>SMS Remote Control</b>	<b>0</b> , 1~24, <b>Off</b>	The value ranges from "0"to "off" which represents the frequency of receiving SMS commands. "0" indicates 10mins, "1~24" indicates the interval time of 1~24 hour. "off" turns the SMS remote control function off.
<b>Reset MMS Config.</b>		Press OK to reset all MMS settings.

Press  key to enter/exit the MMS Setup menu.



Choose your Country.



Choose the Wireless Operator.



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### **3.3 Change Language**

- **Set up language on PC**

Select country and store update file to SD card. Then put SD card into camera. Powering on the camera will change your language.

- **Set up language From MMS menu:**

Enter MMS setting menu and select country, save update and language will be changed.

### **3.4 File Format**

The SD card stores all original pictures and videos in the folder \DCIM\100IMAGE, and all MMS pictures in the folder \MMS\ with the same filename. Pictures are saved with filenames like IMAG0001.JPG and videos like IMAG0001.AVI.

In the **OFF** mode, you can use the provided USB cable to download the files to a computer. Or you can insert the SD card into a SD card reader, plug in a computer, and browse the files on the computer without downloading.

The AVI video files can be played back on most popular media players, such as Windows Media Player, etc.

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## LTL-6310/6310W SERIES PRODUCTS

Ltl 6310 consists of Ltl-6310 and Ltl-6310W, Please note that the only difference is Lens angle: Ltl-6310 the 52° whereas Ltl-6310W has a much wider angle of 100° .

### 4.1 Series model:

Ltl-6310 series:

1. Ltl-6310MC Camera
2. Ltl-6310MG Camera (MMS wireless)

Ltl-6310W series:

1. Ltl-6310WMC Camera
2. Ltl-6310WMG Camera (MMS wireless)

### 4.2 Ltl-6310W :



( taken at the same spot, LEFT Ltl-6310W, RIGHT Ltl-6310 )

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## **IMPORTANT INFORMATION**

### **5.1 Power Supply**

Ltl-6310 Series camera can work on electricity up to 12 voltages. The 4 AA batteries in the front of camera, the 8 AA batteries in the back of camera, and the external power supply form a four-path parallel circuit. Each path is isolated from others and does not charge or discharge others. In addition, the camera can extend its life in the field by being powered by an external solar panel Ltl-SUN.

### **5.2 SD Card**

There are various brands of SD cards on the market. We tested on our camera as many brands as we can. However, we cannot guarantee every brand will be compatible with our camera. Please format the SD card on the camera before use. If it doesn't work, please try another brand.

### **5.3 Auto Adjustment on Video Length**

To extend battery life, we strongly recommend using 12 AA alkaline batteries when operating the camera in Video mode or Cam+Video mode. Compared to similar products on the market, our camera takes thirty percent more video clips. Moreover, when battery power gets low, our camera automatically shortens the video length so as to take more clips of more events. As a result, the total number of video clips doubles, even triples that of other products, which provides users with more useful records.

Note: Our camera performs at extreme cold environment as low as -30°C (-22°F), in which the battery power capacity deteriorates drastically. Therefore, the number of video clips decreases accordingly.

### **5.4 850nm and 940nm IR LED**

There are two types of IR LED on the Ltl-6310/6310W series camera: 850nm and 940nm. For Ltl-6310 series camera(non-wide lens), the former provides up to 75 feet/ 23m flash range whereas the latter up to 59 feet / 18m flash range. For Ltl-6310W series camera, the former provides up to 59 feet/ 18m flash range whereas the latter up to 45 feet / 13.5m flash range. The benefit of 940nm IR LED, however, is it emits black flash that is invisible in the dark.

### **5.5 Mount on Tripod**

The camera can be mounted on a 1/4" tripod. **CAUTION: To avoid breakage, always turn the knob in position to secure the bottom cover.**



## 5.6 FAQs on MMS Function

- *I set up a new receiving phone number. But the MMS pictures are still being sent to the old number. What should I do?*  
Switch the camera OFF. Wait for at least two minutes. Then switch it ON.  
Or, switch the camera OFF, take all battery out of the camera, and then reinstall it.
- *Why did it take so long to receive the MMS pictures / why didn't I receive any MMS pictures?*  
The most common reason is that the signal was too weak. Try different spots. Or the batteries ran out.
- *I programmed the camera to constantly take pictures. But some pictures were not sent to my phone. How?*  
The Ltl-6310M series camera is designed to constantly send MMS pictures to the recipient's phone. However, if the signal is too weak, it may not work stably.
- *Why did I receive some pictures with partial image, and some with red "X"?*  
The camera was in motion when sending pictures. Or the signal was unstable.
- *I was pretty sure the battery was quite low. But I didn't get any text alert. Why?*  
The camera "assumes" you install new batteries when you start the camera. It tracks the usage of the batteries and texts you when the power is low. However, if you replace the present batteries with some "used" ones at a point before receiving a text alert, the camera will get "confused" and not send a text alert later on.
- *My cell phone shows strong signal. Why does the display on the camera not show the MPNO's name or signal?*  
Take all of the batteries out from the camera, and then reinstall it. Switch to TEST mode. Wait for about 45 – 60 seconds, and then check the signal on the LCD display.
- *I just installed the upgrading firmware. Do I need to set up the camera and the MMS function?*  
Yes. After you upgrade the camera, all previous settings of the camera and the

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MMS are gone. You need to run the **setup.exe** file on the enclosed CD or visiting the LTL ACORN national distributor's website to download to set up the camera again. Refer to **2.4 Set up Camera on PC** and **2.5 Set up MMS on PC**.

### 5.7 Battery Level Indication



The camera shows the battery level on each MMS picture. When the battery level is high, a code **B3** shows on the bottom left corner of the image. After the battery level drops, the code changes to **B2**. When the battery level gets very low, the code changes to **B1**, which means it's time to change the batteries. So you can decide from home when to change batteries.

Also, if you use brand new batteries every time you set up your camera, you will receive a text alert message from the camera when the battery level is low.

## FIRMWARE UPGRADES

### 6.1 Firmware Upgrades

The manufacturer reserves the right to upgrade the camera and the firmware. Follow the steps below to implement the upgrades:

- Back up the contents on the SD card on your computer.
- Install batteries and the SD card in the camera.
- Format the SD card on the camera.
- Retrieve the SD card and plug it in your computer (SD card reader may needed). Copy and paste the FW6310.bin file in the root directory of the SD card. (Consult with the national distributor if there is an upgrade available and where to download it.)
- Retrieve the SD card and insert it back into the camera. Press “” key and put Switch to **TEST**, wait until the logo “Updated Firmware Successfully” appear and then loosen the “” key.
- Enter **MENU**, navigate the marker to **DEFAULT SET**, and press **OK**.
- Re-format the SD card on the camera. The upgrade will have been installed successfully.

**Attention: A firmware upgrade program for one model is not compatible on other models. In other word, an upgrade for Model Ltl-6310M only applies to that model. If a camera is accidentally upgraded by running a non-compatible program, it will quit working and needs to be sent back for repair. This issue is not covered under warranty.**



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## LIMITED WARRANTY

We take great pride in our products. We always stand behind our promises. We provide leading warranty term and service. Every LTL ACORN trail camera comes with a limited times warranty.

We guarantee our trail cameras to be free of defects in materials and workmanship under normal use and service for a period of a limited time after the registered date of purchase. This warranty does not cover damages caused by misuse, abuse, or improper handling or installation, by user installed batteries, or by repair attempts of someone other than our authorized technicians.

In the event of a defect under this warranty, we will, at our option, repair your camera or replace it with the same or comparable model free of charge, provided the product is returned postage paid. This warranty only extends to the original retail buyer from our authorized dealer. Purchase receipt or other proof of the date of the original purchase is required to receive warranty benefits. The warranty on any replacement product provided under the original warranty shall be for the remaining portion of the warranty period applicable to the original product.

This warranty extends solely to failures due to defects in materials or workmanship under normal use. It does not cover normal wear of the product.

Please contact our tech support department to determine the nature of the problem before you return a LTL ACORN product under this warranty for repair or exchange.



## Appendix I: TECHNICAL SPECIFICATION

Model	Parameters	Ltl-6310MC	Ltl-6310MG	Series-Wide Angle lens
<b>Image Sensor</b>	5 Mega Pixels Color CMOS	Yes	Yes	Yes
<b>Max Pixel Size</b>	2560x1920	Yes	Yes	Yes
<b>Lens</b>	F=3.1; FOV=52°; Auto IR-Cut	Yes	Yes	N/A
<b>Lens</b>	FOV=100°; Auto IR-Cut	N/A	N/A	Yes
<b>IR Flash</b>	850nm	23meters/ 75 feet	23meters/ 75 feet	18meters/ 59feet
	940nm (Black Flash)	18meters/ 59feet	18meters/ 59feet	13.5meters/ 45feet
<b>LCD Screen</b>	40.8x30.6mm(2.0"); 960(RGB)*240DOT; 16.7M Color	Yes	Yes	Yes
<b>Operation Keypad</b>	6 Keys	Yes	Yes	Yes
<b>Memory</b>	SD Card (8MB ~ 32GB)	Yes	Yes	Yes
<b>Picture Size</b>	5MP/12MP/2MP = 2560X1920/4000X3000/1600X1200;	Yes	Yes	Yes
<b>Video Size</b>	1440x1080: 15 fps; 1280x720: 30fps; 640x480: 30fps;	Yes	Yes	Yes
<b>PIR Sensitivity</b>	High/Normal/Low/Off	Yes	Yes	Yes
<b>PIR Sensing Distance</b>	65ft/20m ( Below 77°F/25°C at the Normal Level)	Yes	Yes	Yes
<b>Prep PIR Sensing Angle</b>	Left and right light beams form an angle of 100°; Each lens covers 10°	Yes	Yes	Yes
<b>Main PIR Sensing Angle</b>	35°	Yes	Yes	Yes
<b>Operation Mode</b>	Day/Night	Yes	Yes	Yes
<b>Trigger Time</b>	0.8 Seconds	Yes	Yes	Yes
<b>Trigger Interval</b>	0sec. - 60min; Programmable	Yes	Yes	Yes
<b>Shooting Numbers</b>	1~3	Yes	Yes	Yes
<b>Video Length</b>	1-60sec.; Programmable	Yes	Yes	Yes
<b>Camera + Video</b>	First take Picture then Video	Yes	Yes	Yes
<b>Playback Zoom In</b>	1~16 Times	Yes	Yes	Yes
<b>Time Stamp</b>	On/Off; Include serial No., temperature and moon phase	Yes	Yes	Yes
<b>Timer</b>	On/Off; Programmable	Yes	Yes	Yes
<b>Timer2</b>	On/Off; Programmable	Yes	Yes	Yes
<b>Password</b>	4-Digit Numbers	Yes	Yes	Yes
<b>Device Serial No.</b>	4 digits and 26 alphabets set by yourself	Yes	Yes	Yes

Appendix I: Technical Specification

<b>Time Lapse</b>	On/Off; 1 Second ~ 24 Hours Programmable	Yes	Yes	Yes
<b>Beep Sound</b>	On/Off;	Yes	Yes	Yes
<b>SD Cycle</b>	On/Off;	Yes	Yes	Yes
<b>MMS Options</b>	VGA = 640x480; SMS = Text Msg.; OFF Programmable	Upgradeable	Yes	Model selectable
<b>MMS Numbers</b>	"0" = Unlimited; 1 ~ 99/Day	Upgradeable	Yes	Model selectable
<b>MMS Phone No.</b>	1 ~ 3 Phone Numbers	Upgradeable	Yes	Model selectable
<b>MMS E-mail</b>	1 ~ 3 E-mail addresses	Upgradeable	Yes	Model selectable
<b>GPRS E-mail</b>	1~3 E-mail addresses	Upgradeable	Yes	Model selectable
<b>Low-Battery SMS Alert</b>	"Low battery " text alert sent	Upgradeable	Yes	Model selectable
<b>language setting</b>	Change Country Can Setting Language	Yes	Yes	Yes
<b>Power Supply</b>	12xAA;	Yes	Yes	Yes
<b>External DC Power Supply</b>	Plug Size: 4.0mmx1.7mm 6 ~ 12V (2 ~ 1A)	Yes	Yes	Yes
<b>Stand-by Current</b>	0.4mA	Yes	Yes	Yes
<b>Stand-by Time</b>	4~6 Months (4xAA~12xAA)	Yes	Yes	Yes
<b>Auto Power Off</b>	Auto power off in 3 minutes if no keypad input	Yes	Yes	Yes
<b>Power Consumption</b>	150mA (+350mA when IR LED lights up)	Yes	Yes	Yes
<b>Low Battery Alert</b>	4.2~4.3V	Yes	Yes	Yes
<b>Interface</b>	TV out (NTSC); USB; SD Card Slot; 6V DC External	Yes	Yes	Yes
<b>Mounting</b>	Strap; Tripod	Yes	Yes	Yes
<b>Waterproof</b>	IP54	Yes	Yes	Yes
<b>Operation Temperature</b>	-22~+158°F/-30 ~+70°C	Yes	Yes	Yes
<b>Operation Humidity</b>	5% ~ 95%	Yes	Yes	Yes
<b>Certificate</b>	FCC & CE & ROHS	Yes	Yes	Yes

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## Appendix II: PACKAGE CONTENTS

<b>Part name</b>	<b>Quantity (Ltl-6310MC)</b>	<b>Quantity (Ltl-6310MG)</b>	<b>LTL-MM2 MMS-module</b>
Digital camera	1	1	0
LTL-MM2 MMS-module	0	1	1
TV AV IN cable	1	1	0
USB cable	1	1	0
Strap	1	1	0
External DC cable (optional)	1	1	0
CD	1	1	1
Warranty Card	1	1	1

## **FCC Caution.**

### **§ 15.19 Labelling requirements.**

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### **§ 15.21 Information to user.**

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

### **§ 15.105 Information to the user.**

**Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **RF Exposure statement**

The devices has been tested and meets applicable limits for Radio Frequency (RF) exposure.

This equipment complies with FCC radiation exposure requirement. The minimum distance for user is 30cm.